

WHAT IS CLAIMED IS:

1. A method for adjusting the clock of a base transceiver station comprising the steps of:
relating the base transceiver station's current time to a common time
5 reference;
providing the base transceiver station with an offset based on the relation;
and
adjusting the base transceiver station's clock based on the offset.
2. The method of claim 1, further comprising the steps of:
10 measuring the time of base transceiver stations surrounding the base
transceiver station; and
measuring the time of the base transceiver station's clock.
3. The method of claim 2, further comprising the steps of:
providing a frame number and approximate control channel position of base
15 transceiver stations surrounding the base transceiver station, wherein the time of
base transceiver stations surrounding the base transceiver station and the time of
the base transceiver station's clock are measured using the frame number and
approximate control channel position.
4. The method of claim 3, wherein the frame number is transmitted in
20 a broadcast control channel and the approximate control channel position is a
position of a shared control channel.
5. The method of claim 2, wherein the base transceiver station is
provided with information from a location measurement unit, wherein the base
25 transceiver station's clock is adjusted based upon the information from the location
measurement unit.

6. The method of claim 5, wherein the location measurement unit is associated with the base transceiver station.

7. The method of claim 5, wherein the location measurement unit is associated with another base transceiver station, wherein the another base transceiver station is within radio range of the base transceiver station.

8. The method of claim 5, wherein the information contains an indication of the accuracy of the clock of a base transceiver station used for generating the information.

9. The method of claim 1, wherein if the common time reference is not available, another base transceiver station's clock is used as the common time reference.

10. The method of claim 9, wherein the another base transceiver station's clock is used for synchronization of equipment co-sited with the base transceiver station.

11. The method of claim 1, further comprising the steps of:
determining global positioning satellite (GPS) time; and
comparing the GPS time to the time of the base transceiver station's clock, wherein the base transceiver station's clock is adjusted based upon the offset and the comparison.

12. The method of claim 11, further comprising the step of:
providing assistance data for decoding the chip sequence of a GPS signal.

Sub A17
13. The method of claim 11, wherein the GPS time is determined by examining messages of a GPS signal.

14. The method of claim 1, wherein the offset is provided by a serving mobile location center.

5 Sub A17
15. A system comprising:
means for relating the base transceiver station's current time to a common time reference;
means for providing the base transceiver station with an offset based on the relation; and

10 means for adjusting the base transceiver station's clock based on the offset.

16. The system of claim 15, further comprising:
means for measuring the time of base transceiver stations surrounding the base transceiver station; and
means for measuring the time of the base transceiver station's clock.

15 17. The system of claim 16, further comprising:
means for providing a frame number and approximate control channel position of base transceiver stations surrounding the base transceiver station, wherein the time of base transceiver stations surrounding the base transceiver station and the time of the base transceiver station's clock are measured using the
20 frame number and approximate control channel position.

18. The system of claim 17, wherein the frame number is transmitted in a broadcast control channel and the approximate control channel position is a position of a shared control channel.

19. The system of claim 16, wherein the base transceiver station is provided with information from a location measurement unit, wherein the base transceiver station's clock is adjusted based upon the information from the location measurement unit.

5 20. The system of claim 19, wherein the location measurement unit is associated with the base transceiver station.

21. The system of claim 19, wherein the location measurement unit is associated with another base transceiver station, wherein the another base transceiver station is within radio range of the base transceiver station.

10 22. The system of claim 19, wherein the information contains an indication of the accuracy of the clock of a base transceiver station used for generating the information.

15 23. The system of claim 15, wherein if the common time reference is not available, another base transceiver station's clock is used as the common time reference.

24. The system of claim 23, wherein the another base transceiver station's clock is used for synchronization of equipment co-sited with the base transceiver station.

20 25. The system of claim 15, further comprising:
means for determining global positioning satellite (GPS) time; and
means for comparing the GPS time to the time of the base transceiver station's clock, wherein the base transceiver station's clock is adjusted based upon the offset and the comparison.

26. The system of claim 25, further comprising:
means for providing assistance data for decoding the chip sequence of a
GPS signal.

27. The system of claim 25, wherein the GPS time is determined by
examining messages of a GPS signal.

28. The system of claim 15, wherein the offset is provided by a serving
mobile location center.

29. A radio network comprising:
a base transceiver station including a clock;
a location measurement unit;
wherein the location measurement station provides information regarding a
current common time reference and wherein the clock is adjusted based upon the
information.

30. The radio network of claim 29, further comprising:
another base transceiver station, wherein the location measurement unit is
associated with the another base transceiver station.

31. The radio network of claim 30, wherein the information contains an
indication of the accuracy of the clock of a base transceiver station used for
generating the information.

32. The radio network of claim 29, further comprising:
another base transceiver station; and

another location measurement unit, wherein if the location measurement unit is not operative, the base transceiver station's clock is adjusted using information provided by the another location measurement unit.

5 33. The radio network of claim 32, wherein the location measurement unit and the another location measurement unit include a GPS receiver.

34. The radio network of claim 29, wherein the common time reference is global positioning satellite (GPS) time.

Add A17